

**IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF MASSACHUSETTS**

CYTOLOGIX CORPORATION,

Plaintiff,

v.

VENTANA MEDICAL SYSTEMS, INC.,

Defendant.

CIVIL ACTION NO. 04-11783 (RWZ)

**DECLARATION OF GEOFFREY NUNBERG IN SUPPORT OF DEFENDANT'S
OPPOSITION TO PLAINTIFF'S COMBINED MOTION FOR CLAIM
CONSTRUCTION AND SUMMARY JUDGMENT OF INFRINGEMENT**

I, Geoffrey Nunberg, declare as follows:

1. I have been retained by the firm of Wilson Sonsini Goodrich & Rosati as a consultant in connection with the litigation between CytoLogix Corporation and Ventana Medical Systems, Inc. I have personal knowledge of the facts set forth below.

2. I am a Full Professor at the School of Information Management and Systems at the University of California at Berkeley, a Senior Researcher at the Center for the Study of Language and Information at Stanford University, and a Consulting Full Professor of Linguistics at Stanford University. I have also taught at the University of California at Los Angeles, the University of Rome, and the University of Naples. I have been a Distinguished Visiting Professor at the University of Texas, Princeton University, Pompeu Fabra University in Barcelona, and the Free University of Berlin. Until 2001, I was a Principal Scientist at the Xerox Palo Alto Research Center, working on the development of linguistic technologies.

3. I serve as the Chair of the Usage Panel for the *American Heritage Dictionary*. I have also served as Usage Editor of the dictionary. I have been a trustee of the Center for Applied Linguistics and have served on the steering committee of the Coalition for Networked Information. I have also served on the scientific committees of the Ecole Nationale Supérieure des Sciences de l'Information et des Bibliothèques (Lyon) and the Università degli Studi (San Marino).

4. I am a named inventor on three issued United States patents, entitled "Article and method of automatically determining text genre using surface features of untagged texts," "Article and method of automatically filtering information retrieval results using text genre," and "Processing natural language text using autonomous punctuational structure." I am also a named inventor on four published United States patent applications.

5. I am the author of the books *The Way We Talk Now* (2001), a collection of language commentaries published by Houghton Mifflin, *The Linguistics of Punctuation*

(CSLI-Chicago, 1990), and *The Future of the Book*. (ed.) (University of California Press 1996).

I am the author of numerous publications in refereed journals and conference proceedings. My linguistics publications include “Indexicality and Deixis” (*Linguistics & Philosophy*, 1993); “Idioms” (with Ivan Sag and Thomas Wasow, *Language*, 1994); “Transfers of Meaning” (*Journal of Semantics*, 1995), and “The Pragmatics of Deferred Reference” (*The Handbook of Pragmatics*, 2003). My publications on other language topics include “L’Amérique par la Langue” (*Cahiers de Médiologie*, 1997); “Lingo Jingo” (*The American Prospect*, July, 1997); and “The Persistence of English” (introduction to the sixth edition of the *Norton Anthology of English Literature*).

6. I received my Bachelors of Arts degree in Linguistics from Columbia University in 1971, my Masters of Arts degree in Linguistics from the University of Pennsylvania in 1972, and my Doctor of Philosophy degree in Linguistics from the City University of New York in 1978. A copy of my resume is attached as Exhibit A to this declaration.

7. I have been asked to consider the standard English usage of the phrase “moving the platform and a liquid dispenser relative to each other,” as it appears in claim 1 of U.S. Patent No. 6,541,261 B1. In connection with this issue, I have reviewed the patent and its file history.

8. The word “moving” is used as a gerund (*i.e.*, noun form) of the transitive verb “to move.” A transitive verb is a verb that requires a direct object.

9. In the phrase at issue, both “the platform” and “a liquid dispenser” are direct objects of “moving.” Therefore, the action of the verb is understood as applying to the things denoted by both direct objects.

10. According to standard rules of English interpretation, a sentence of the form “X MOVE Y and Z” (*e.g.*, John moved a chair and a sofa) is interpreted as equivalent in meaning to the sentence “X MOVE Y and X MOVE Z” (*e.g.*, John moved a chair and John

moved a sofa). Therefore, in the phrase “moving the platform and a liquid dispenser,” we understand “moving” to apply both to the platform and a liquid dispenser.

11. The phrase at issue uses the reciprocal pronoun “each other.” I am the author of the Usage Note for the “each other” entry in the *American Heritage Dictionary*.

12. The *American Heritage Dictionary* defines “each other” as a pronoun that is “used to indicate that a relationship or an action is reciprocal among the members of the set referred to by the antecedent.” The dictionary defines “reciprocal pronoun” as “a pronoun or pronominal phrase, such as *each other*, that expresses mutual action or relationship.”

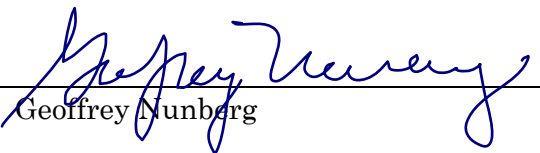
13. Given a sentence containing two elements A and B which are antecedents of the reciprocal pronoun “each other,” one interprets the construction as meaning that the same relation obtains between A and B as between B and A. Thus, the phrase “moving A and B relative to each other” entails moving A relative to B as well as moving B relative to A. *See, e.g.,* Talmy Givón, *English Grammar*, vol. 2 (1993), pp. 81 *ff.* The use of the reciprocal pronoun further requires that the movement of A and B involve roughly simultaneous and related events (p. 83).

14. I understand that CytoLogix proposes the following interpretation of the disputed phrase in claim 1: “There is relative movement between the platform and the liquid dispenser. Relative movement may be accomplished by moving the platform, or the liquid dispenser, or both.” I am unaware of any principle of English syntax or semantics that would support such an interpretation. In fact, such an interpretation is inconsistent with the way reciprocal pronouns are used and interpreted in standard English.

15. In effect, CytoLogix is proposing to arbitrarily rewrite the language of the claim to change its meaning to: “moving either the platform or ~~and~~ a liquid dispenser relative to the ~~each~~ other.” This rewriting substitutes the disjunctive “or” in place of the conjunctive “and.” It also eliminates the reciprocal pronoun “each other.”

16. Suppose, for example, one is describing a new propulsion mechanism for elevators, and describes it as a method for “moving the building and an elevator relative to each other.” This would clearly be both a false and bizarre way of describing the movement of the elevator, since it is understood in this context that buildings do not move. Thus, we never speak of “moving A and B relative to each other” if only one of the elements moves. If CytoLogix’s theory were correct, moreover, one would be able to speak of “moving A and B relative to each other, but not moving A and B,” which is a phrase that is manifestly contradictory.

I declare under penalty of perjury that the foregoing is true and correct. Executed on January 18, 2006, at San Francisco, California.



Geoffrey Nunberg

CERTIFICATE OF SERVICE

I hereby certify that this document filed through the ECF system will be sent electronically to the registered participants as identified on the Notice of Electronic Filing (NEF) and paper copies will be sent to those indicated as non registered participants on April 4, 2006.

/s/ Roger J. Chin

Roger J. Chin